GOVERNMENT OF THAILAND

SUMMARY

OF

THE SECOND FIVE-YEAR PLAN

(1967-1971)

Thailand

The National Economic Development Board
Office of the Prime Minister

Bangkok, Thailand
October, 1966

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INTRODUCTION

The launching of the Second National Economic and Social Development Plan (1967-1971) marks the beginning of another chapter in the economic and social development of Thailand. This Plan is broader than the First Plan both in scope and emphasis. Thailand's Second Five-Year Plan is presented in two parts; first, the overall development shows the broad policies, objectives, growth targets, financial aspects, manpower, regional development, and the role of the state enterprises; second, the sectoral programs which constitute the public development sector of the Plan. In addition, four major new areas are covered in the Second Plan namely:

(1) Emphasis on social development to assure harmony of social and economic transitions;

(2) Discussion on manpower development planning with the view of relating education and training to the nation's manpower requirements;

(3) Greater emphasis on the role of the private sector, particularly the development of industry, trade, and services; and

(4) Important consideration of regional development to accelerate development in the rural and remote areas.

The Second Plan also reviews past trends and significant structural changes in order to use the findings as the basis for major policy proposals which will contribute in a significant degree to the long-term progress and stability of the nation.

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PART I

SUMMARY OF OVERALL DEVELOPMENT

DEVELOPMENT OBJECTIVES AND POLICIES

The Second Five-Year National Economic and Social Development Plan (1966-1971) constitutes another important move towards the acceleration of the economic growth rate and the improvement of the living standard of the Thai people through maximum utilization of natural, financial and human resources for expansion of the economy. To achieve the aforementioned objectives, the Second Five-Year Plan states its principal policy guidelines as follows:

(1) To strive towards further accelerating the economic growth rate, with emphasis on more equitable distribution of income and social benefits.

(2) To reduce the degree of income inequality and geographical imbalance, emphasis will be put on rural development as a measure to increase income of the rural population in remote areas.

(3) To expand employment opportunities and improve the quality of human resources, the Plan will emphasize the elevation of workers' skills to meet the economic and social demands of the society.

(4) To accelerate private industrial investment, private economic activities will be strongly promoted and stimulated by the provision of necessary economic infrastructures and healthy environment within which private enterprise can prosper. The Government's role will be to assist but not to interfere or compete with private business activities.

(5) The primary emphasis will be put on the development of intensive agriculture, raising productivity by greater use of capital and improved techniques, as a means to provide food and employment for a growing population, to provide basic materials for an expanding industry and to provide foreign exchange for the payment of imports.

(6) To accentuate the role of science and technology, particularly in the adaptation and application of modern knowledge to the special needs of the country.

(7) Economic and social development must be geared to the necessity to strengthen the national security.

(8) Financial stability must be maintained as a means of assuring healthy economic growth without disturbing the balance of the economy and of inspiring international confidence.

(9) Development projects will be implemented in accord with their priority and will be designed to yield the greatest benefit at the least possible cost.

ECONOMIC STRUCTURE

In order to attain the abovementioned objectives the Second Plan aims at an increase of 45 percent in Gross Domestic Product over the Plan period (1967-1971). The annual growth target is projected at 8.5 percent per annum in the Second Plan as against 7 percent achieved in the First Plan. By 1971 the Gross Domestic Product will stand at 130 billion baht as compared to 80.2 billion baht in 1965. After allowing for the increase in population at 3.3 percent per year, this will mean more than 25 percent increase in per capita income by 1971.

The growth rate target of real income set for the Second Plan is justifiable in term of higher increase in the volume of both public and private investments as well as the inflow of foreign capital anticipated during the Plan period which will help to generate income and employment. In addition, the expansion of foreign trade, tourism, and other services will play an important part conducive to accelerated economic growth in the next five years.

A significant structural change is expected in the economy during the Plan period. The relative importance of agriculture will decline further as a result of faster expansion in the non-agricultural sectors. By the end of 1971, the projected share of agriculture in the Gross Domestic Product will be only 26.2 percent as compared to 32.9 percent in 1965. The manufacturing sector will increase as percentage of the GDP from 12 percent in 1965 to nearly 14 percent in 1971. Construction, transportation, electricity and water supply, and services will contribute greater shares to national output. This will help diversifying the economy even further.

GROSS DOMESTIC PRODUCT OF THAILAND (1965—1971)

(Millions of baht)

	Actual 1965		Target 1971		Annual Growth Rate 1966-1971
	G.D.P.	Percent Distribution	G.D.P.	Percent Distribution	
Agriculture	26,400.8	32.9	34,031.7	26.2	4.3
Mining & Quarrying	1,676.0	2.1	2,659.6	2.0	8.0
Manufacturing	9,684.3	12.1	17,799.8	13.7	10.8
Construction	3,839.1	4.8	7,577.7	5.8	12.0
Electricity & Water Supply	576.9	0.7	1,369.6	1.1	15.5
Transportation & Communications	5,997.3	7.4	11,217.4	8.6	11.0
Wholesale & Retail Trade	14,928.7	18.6	23,689.9	18.2	8.0
Banking, Insurance, Estate	2,934.6	3.7	7,527.7	5.8	17.0
Ownership of Dwellings	3,394.0	4.2	4,548.3	3.5	5.0
Public Administration and Defence	3,922.2	4.9	7,741.2	5.9	12.0
Services	6,938.5	8.9	11,960.4	9.2	9.5
Gross Domestic Product	80,292.2	100.0	130,123.3	100.0	8.5

Production Targets

Major production targets of the Plan are given in the following table. Agricultural production is expected to grow at 4.3 percent annually over the Plan period. A favorable outlook is anticipated for paddy production which will increase to 13.7 million tons by 1971 as compared to 11 million tons in 1965. The production of maize will increase by 50 percent to 1.5 million tons by 1971. At the same time production of oil seeds, cotton, and vegetables will grow at higher rates. However, output of kenaf, cassava, and rubber will grow at somewhat slower rates principally because of limited international demand. Much of the increase in agricultural output will come from intensive cultivation and larger inputs like fertilizers, improved seeds, and insecticides, as well as the provision of research and extension service, rural credit, marketing facilities, and other institutional services. The annual growth rates of industrial and mining sectors are expected to be 11 percent and 8 percent respectively over the Plan period. Expansion of industrial output is expected to be accelerated to meet the growing domestic and export demand, particularly the outputs

of cement, gunny bags, fertilizers, steel, paper, textile, chemicals, machinery, vehicles, refined petroleum, and consumer goods. These industries will help in achieving a balanced economic growth and provide employment opportunities outside agriculture.

During the Second Plan period, investment in mineral survey and mining development will be increased in order to accelerate exploration and development of mineral resources to meet both international and domestic needs. The output of tin is expected to reach 32,000 tons in 1971 and the prospect of increasing off-shore mining along the west coast is excellent. Production of other minerals, particularly lignite, manganese, gypsum, and iron will be substantially expanded as a result of discovery of new deposits and greater utilization as industrial raw materials. The table below sets out the major production targets of the Second Plan period:

Production	Unit	Actual Production 1965	Production Targets 1971
Agriculture :			
Rice	ton	11,070,000	13,700,000
Maize	ton	1.000,000	1,500,000
Rubber	ton	215,000	250,000
Kenaf	ton	370,000	500,000
Cassava	ton	2.340,000	2,500,000
Soy bean	ton	33,000	50,000
Mung bean	ton	120,000	200,000
Groundnut	ton	121,000	185,000
Cotton	ton	13,000	45,000
Castor bean	ton	32,000	55,000
Tobacco	ton	62,000	88,000
Mining :			
Tin concentrates	ton	26,419	32,000
Lignite	ton	125,000	417,000
Manganese	ton	30,265	50,000
Fluorite	ton	51,889	60,000
Gypsum	ton	11,240	50,000
Industry :			
Cement	ton	1,300,000	2,800,000
Gunny bags	unit	42,400,000	65,000,000
Paper	ton	22,300	60,000
Chemical fertilizer	ton	—	250,000
Car assembly	unit	8,692	250,000
Tires	unit	140,000	300,000
Steel	ton	100,000	400,000
Oil Refinery	milion barrel	13.0	18.0

SIZE OF THE PLAN

In order to attain the growth targets and to implement the public development programs proposed for the Second Plan, it is expected that 56 billion baht of development expenditures in the public sector will be required as against 32.6 billion baht in the First Plan. In addition, approximately 88 billion baht will be invested by the private sector during the Second Plan period. The amount of public development expenditures for the Second Plan reflects the Thai Government's determination to promote national development as well as national security to the utmost. In determining the size of the Plan, which is almost double that of the First Plan, due consideration has been given both to the expected availability of financial resources and the technical manpower capacity of the country for effective implementation.

Sectoral Allocations

The following table shows the sectoral allocations of public development expenditures and indicates sectoral priorities in the First and the Second Plans.

Sectoral Allocations of Development Expenditures in the First and Second Plans

(Millions of baht)

Sector	First Plan 1961—1966	Percentage	Second Plan 1967—1971	Percentage
Agriculture	4,600	14.15	11,300	20.23
Industry and Mining ...	2,600	7.94	885	1.58
Power	4,300	13.26	3,540	6.31
Transport & Communications	10,200	31.42	17,080	30.58
Commerce	—	—	180	0.32
Community Facilities ...	5,500	16.74	10,250	18.35
Health	1,400	4.18	2,570	4.60
Education	2,500	7.63	6,520	11.67
Unallocated	1,500	4.78	3,550	6.36
Total	32,600	100.00	55,875	100.00

The differences in sectoral allocations are intended to bring them in line with the current requirements of the economy. The increase is particularly impressive for agriculture. This reflects the importance attached to the achievement of greater agricultural productivity and acceleration of overall rural development. At the same time transport and communications still retain the largest portion of the development plan expenditures although their share is expected to decline slightly. Much of the increase in development expenditures on community facilities will benefit the rural areas and promote urban development such as housing, water supply, sewerage, power, and city transport and communications. The increases in the social sectors, including health and education, arise from both the emphasis on investment in human resources development and the need to promote the welfare of the population. The share of development allocation for industry and mining declines substantially due to the Government's policy of restricting the expansion of public enterprises on the one hand and promoting the growth of private investment in these fields on the other.

Financing

Financing of development expenditures during the Second Plan, as in the First, will come mainly from domestic sources. The financing required for public development outlays under the Second Plan will be as follows:—

(Millions of baht)

Source	First Plam 1961—1966	Percentage	Second Plan 1967—1971	Percentage
Domestic Sources	22.019	68.4	41,440	74.9
Foreign Sources (Grants and Loans)	10,638	31.6	14,435	25.1
Total	32,657	100.0	55,875	100.0

It is noteworthy that financing of public development expenditures during the Second Plan will come mainly from domestic sources or about 75 percent. It is clear that raising the required level of domestic financial resources will call for considerable effort and determination on the part of the Government. Efficiency in public service will also be necessary in order to keep the non-development expenditures to a minimum.

Foreign financing required for the Second Plan is somewhat larger than the First in absolute term, but its share of the total development expenditures will decline somewhat, which indicates the Government's policy to mobilize domestic resources to the greatest possible extent.

MANPOWER AND EMPLOYMENT

The Second Plan aims at proper development and more efficient utilization of manpower in order to generate employment oportunities commensurate with the increase in the labor force, promote fuller rural employment, and improve the quality of human resources through education, training and upgrading of skills in response to the present and future manpower requirements.

During the Plan period, the labor force growth which represents the net addition of persons to the labor market is estimated at about 2.2 million persons for whom new jobs must be created. Measures to improve and expand the overall employment situation will include expansion of employment in non-agricultural activities and more effective preparation of youth for employment through education and vocational training. Other measures will include promotion of labor-intensive production techniques, fuller utilization of industrial capacity, better organization of the employment market and special programs designed to meet the needs of unemployed and underemployed persons, particularly in the rural areas. Later programs will include rural development through community development, rural public works, and other activities.

Employment Potential of the Second Plan

(millons of person)

Economic Sector	1966	1971	Increase 1966—1971
Agriculture	11.62	12.69	1.06
Manufacturing and Mining	0.73	1.03	0.30
Construction	0.11	0.16	0.05
Electricity and Water supply	0.03	0.06	0.03
Transport and Communications	0.23	0.32	0.09
Trade and Commerce	1.03	1.37	0.34
Services	0.80	1.14	0.34
Total	14.55	16.76	2.21

Requirements of professional, technical, and skilled manpower will be met by expanding university education to augment the supply of professionals such as engineers, physicians, and scientists. In addition, the Thailand Productivity Center is training managerial personnel at all levels. During the Second Plan period the Center will expand its activities to provide training for about 5,000 managerial personnel. At the same time, a large number of administrative personnel and officers of various government departments and private industry will be selected for training abroad in their respective fields of specialization. According to a special study conducted by the National Economic Development Board, approximately 10,000 government officials will require training abroad during the Second Plan period. For the middle level manpower, the World Bank has approved a loan for improvement of vocational education which will result in annual output of 250 teachers, 2,100 skilled persons in the mechanical fields, and 1,250 middle-level agriculturists. The apprenticeship program will be organized for training vocational school graduates and new entrants to the labor market with practical training necessary to make them full-fledged skilled workers. This program will be done with the cooperation of industries to suit their manpower requirements

REGIONAL DEVELOPMENT

One of the development objectives for the Second Plan is to alleviate the regional income disparities. This regional imbalance is a cause for concern both from the points of view of development and national security. The Plan proposes several measures and regional development programs in order to accelerate development in the rural areas. It is realized that better distribution of the benefits of development to all regions, in particular remote areas, will prove more beneficial to the overall national development in the long run.

During the period 1967-1971, the Plan outlay for special regional development programs is projected at 5,800 million baht.

(1) Regional Development Programs. Special development programs for five regions, namely, the North, Northeast, South, East, and West, will be carried out under the supervision of the respective Regional Development Committees. Regional development projects include construction of rural roads, urban development, and other social services which are listed as high priority for particular localities.

(2) Local Administration Development Programs. These are development programs which are executed by the Provincial Administrative Organizations, Municipalities, and Municipal Districts throughout the country. During the Plan period, the local administration development expenditures are projected at around 4,100 million baht. About 55 per cent

of the projected outlays will come from local government revenues and the rest will be subsidized by the Central Government. The development programs emphasis construction of urral roads, communication services, urban development, recreation facilities, health, sanitation, and other services.

(3) Accelerated Rural Development Program. ARD is another special regional project which aims at accelerating and extending development benefits to the remote and sensitive areas in 14 provinces of the Northeast and the North ranging from Ubol to Chiengmai. The program's objective is to provide basic facilities to the villages such as pioneer roads, land clearing, and village water supply, as well as organizing farmers' associations at village level which function to promote the interest of the farmers in conjunction with the Government's agricultural extension service. In addition, ARD also provides assistance in the fields of medical service and rural education.

(4) Remote Area Development Programs. One of the most important rural development project is carried out by the Mobile Development Units (MDU) operated by the Ministry of Defence under the supervision of the National Security Command. This project is oriented towards national defense and security. The Mobile Development Units are sent out to the remote areas along the borders and among hilltribes which are subject to political infiltration and suffer from extreme poverty and lack of medial care. The program aims at providing assistance in all needed fields. Personnel for the MDU are drawn from the three Armed Forces and the civil service. In addition, there is a small remote area development program operated by the Ministry of Interior.

(5) Special Area Development Projects. These include the Pasak Basin Development Project, Sattaheep Regional Development Project, and Thai-Israel Area Development Project in Petchaburi. The projects are carried out for specific purposes suitable for the particular requirements of these areas.

Development Expenditures for Special Regional Development Programs

Program	1967 - 1971 (million baht)
1. Regional Development Programs	400
1. Central Government Subsidy to the Local Administration Development Programs	1,800
3. Local Administration's Own Financing	2,300
4. Accelerated Rural Development Program	1,000
5. Remote Area Development Program	220
6. Special Area Development Projects	80
Total	5,800

THE DEVELOPMENT ROLE OF STATE ENTERPRISES

During the Plan period state enterprises will play a significant role in implementing several development projects. State enterprises will provide development outlays of 6,800 million baht, or approximately 12 percent of the total development outlays of the public sector. Over two-fifths will come from their own earnings, and the remainder will be made available from budget appropriations as well as disbursements of foreign grants and loans.

The objective of the Plan regarding the development role of state enterprises is to limit their role to those of providing public utilities and services vital to the national interest and security. At the same time, inefficient state enterprises will be given careful appraisal in order to make necessary improvements or to discontinue their operations by sale or lease to the private sector.

The development activities of the state enterprises during the Plan period include the generation and distribution of electric power, transport and communication services, namely, railways, ports, telephones, radios and televisions, air maritime and road transports; production of armament and military supplies: and promotion of tourism. It is not the aim of the Government to have state enterprises compete with private enterprises since the prime objective of the Plan is to promote, encourage, and accelerate private investment.

PART II

SECTORAL DEVELOPMENT

AGRICULTURE AND COOPERATIVES

The Plan objectives in the agricultural sector are to accelerate and diversify agricultural production as well as improve the quality of agricultural products, and to increase the real income of the farmers in order to promote the development in the rural areas. The target is an annual rate of growth in agriculture of 4.3 percent against 4 percent achieved under the First Plan.

The above targets will be achieved through the following main development objectives:—

— Expanding the agricultural infrastructure such as irrigation and transport networks.

— Developing the natural resources such as land, forest and water resources which are valuable for agriculture and bring them into a more productive use.

— Improving and strengthening research and experimentation in order to modernize agricultural techniques and to increase productivity.

— Promoting farm institutes such as farmers' associations, co-operatives, young farmers's associations, agricultural credit etc., and improving the land tenure system, as well as promoting commercialization of agriculture.

— Improving the marketing of agricultural products so that the farmers can receive fair remuneration for their labor, and grading of agricultural products especially for exports.

In order to implement these policy objectives, 11,300 million baht is allocated for development of the agricultural sector which represents about 20 percent of the total outlays of the Second Plan, as compared to 14 percent during the First Plan, the following development programs will be carried out during the Plan period:—

Irrigation

By the end of 1971, it is estimated that the total irrigable area will be expanded to 15 million rai as compared to 11.7 million rai at the end of 1966. Apart from the unfinished projects carried over from the First

Plan, the following major projects will be implemented in the irrigation and flood control program during the Second Plan: Phasom, (Nan Project), Uttaradit, Greater Meklong, Pran River, Kud and Water storages projects in the Northeast.

Irrigable areas at the end of 1966 as compared with the estimated irrigable areas at the end of 1971:—

	Number of rai	
	1966	**1971**
State irrigation	9,666,100	11,866,600
People's irrigation	1,174,900	1,674,900
Water Storages	360,000	499,500
Water Conservation	500,000	960,000
Total	**11,701,000**	**15,001,000**

Land Development

The land development program during the Plan period includes land survey and classification, soil fertility survey, soil conservation as well as the survey of land tenure need. In addition, two additional land development centres will be established at Pratumtani and Chacherngsao. Soil survey analysis to determine soil fertility and suitability for agricultural purposes will be conducted in the Chao Phraya and Nan river basins which will cover a total area of 1.5 million and 2 million rai respectively.

Rubber Replanting Scheme

Replanting of rubber trees with high yielding varieties will be further accelerated. The amount of subsidy fund made available to the planters under the Royal Act for Assisting Rubber Planters have been raised to 1,850 baht per rai. It is envisaged that by the end of 1971, approximately 230,000 rai will be replanted making the total replanted area of 388,661 rai or about 39% of the total area which needs replanting.

Agricultural Research

Agricultural crops research will be strengthened at all levels. Apart from the encouragement of pure research at a high level by the establishment of a National Agricultural Research Institute and a number of specialized research institutes, the Plan makes provision for strengthening and expanding the two Regional Agricultural Centres at Khon Kaen and Chainat. Other research and experimental stations will also be strengthened by providing additional equipment and research staff.

Agricultural Extension

Extension services will be strengthened in order to improve agricultural productivity by setting up more demonstration plots of selected high-yield varieties of rice, promoting the use of fertilizers, expanding the disease eradication and pest control works, and promoting second cropping during the dry season, especially in the areas under irrigation. In addition, the Plan makes provision for establishing three more centres for control of pests and crop disease. as well as expanding the agricultural broadcasting program.

Forestry

Forest control programs, particularly the forest protection and patrol units, will be expanded. During the Plan period an additional 100 forest protection and patrol units will be established. The afforestation program will be further accelerated by planting 15,000 rai of teak and 10,000 rai of other timbers annually over the Plan period. Research activities in the field of forestry will also be improved and expanded. More attention will be given to the preservation of wild life and the creation of additional national parks.

Fisheries

Emphasis will be put on the development of marine fishery, particularly the encouragement of deep-sea fishing through the improvement of fishing gear and method. A deep-sea fishing training center will be established, and a survey of fishing beds in the Gulf of Thailand, the South China sea and the Indian Ocean will be conducted covering a total area of 1.2 million square kilometers. Research and extension activities in the field of fresh and brackish water fishing will also be intensified during the Plan period.

Livestock Development

The main features of the livestock development program are the acceleration of work on breeding, disease control, and animal artificial insemination as well as the improvement of animal nutrition. Twenty-six more artificial insemination stations will be established in various regions of the country.

Cooperatives and Agricultural Credits

The Plan calls for the improvement and expansion of the cooperative movement in various forms, namely land cooperatives, particularly in the areas covered by major irrigation projects, and the strengthening of the credit cooperatives. Credit operations of the Bank for Agricultural and Agricultural Cooperatives will be further extended with the opening of 57 more branches in different regions of the country.

INDUSTRY AND MINING

The objective adopted in the Second Plan is to accelerate industrial development in order to bring about a structural change in the economy and assure balanced growth. Major industrial development policy is concentrated on private industrial investment promotion, particularly, those industries which utilize indigenous raw materials, and earn or save foreign exchange. Adequate provision of infra-structural facilities, technical services, training, fiscal and monetary incentives, and financial assistance in the form of industrial loans are envisaged for the development of both large and small-scale industries. Meanwhile, the Government will restrict the establishment of new industrial state enterprises to compete with private sector, excepting the field of public utilities. At the same time, greater attention will be paid to the development of industrial estates.

The proposed development expenditure for this sector is envisaged at approximately 885 million baht which is about 1.6% of the total development expenditures of the Second Plan, as compared to 2,600 million baht or 7.9% of total development expenditures during the First Plan period. This is due to fact that most of the industry sector's financial allocation in the First Plan has represented the budget expenditures in support of the industrial state enterprises which is declined under the Second Plan. This reflects the policy of restricting the establishment of new state enterprises and investing only to improve the efficiency of present facilities, and emphasizing better organization and management techniques.

During the Plan period it is anticipated that industrial production will increase at least 11 percent annually while it's share in the value of total gross domestic product will rise to 13.7 by 1971. Several measures have been adopted by the Plan to facilitate private industrial investment. In addition to continuing programs of industrial finance, management development and industrial research, new projects have been initiated to strengthen the small scale industries which must serve as the base for future growth. Major programs in industrial development included in the Plan are as follows:—

Industrial Promotion

Considerable progress was achieved in promoting domestic and foreign investment during the First Plan period. The Board of Investment, since the adoption of the Industrial Promotion Act in 1960, has issued 390 promotion certificates to various companies with the total working capital amounting to 10,000 million baht. In addition, it is anticipated that during the Second Plan 90 promotion certificates will be issued annually. Particular emphasis will be put on industries based on indigenous raw materials. The Industrial Promotion Act will be revised so as to create a more favorable climate for private investment, particularly, to promote industrial investment outside Bangkok.

Additional capital funds will also be provided to the Industrial Finance Corporation of Thailand (IFCT) which will take a more active role. It is envisaged that demand for industrial loans from the IFCT will increase to a rate of 80 million baht annually over the Plan period.

During the Second Plan, several programs and measures will be adopted by the Government to accelerate the growth of industries. The establishment of a Small Industry Service Institute (SISI) will help to provide technical extensions and advisory services, management training, product design and market research services to the small industries. Credit facilities for small industries will be expanded, the Loan Board expects that loans to small industries will be made at a rate of at least 10 million baht a year during the Plan period. The activities of the Productivity Centre, standardization of the industrial products, industrial research and planning will be improved and expanded. The establishment of industrial estate at Rangsit, with communication and public utility facilities in the area of 500 rai, will be started in 1967. Setting up of new industrial estates in other regions will be encouraged during the Plan period.

Mineral Development

The main objectives of the mineral development program are to undertake the exploration and exploitation of the mineral resources of the country, and to accelerate the geological investigations to identify the deposits, particularly of tin, iron ore, fuels, asbestos, manganese, and other sub-soil resources for making fertilizers, as well as the extensive drilling program for the exploration of ground water resources. Private investment in the mining industry is strongly encouraged by the Government which plans to improve the law and regulations concerning the rights and concessions for mineral exploitation. The major mineral development projects include the exploration of ground water, geological surveys, and the expansion of the Mineral Dvelopment Centres in the Northern, Southern, and Northeastern parts of the country.

POWER

The power development program of the Second Plan is conceived within the context of the goal of providing an adequate supply of electric energy from various sources, namely hydro, steam, as well as diesel, for both industrial and domestic consumptions with the gradual reduction of power rates. To achieve these objectives the Plan includes a number of projects to increase generating capacities and develop new sources of power generation to extend the transmission and distribution system and develop rural electrification, as well as interconnecting the national grid system. A coordinating committee responsible for the close coordination in the generation and distribution of power will be set up.

The physical targets for power development during the Plan period are given below:

(thousand kilowatts)

Sources	Actual Generating Capacity in 1666	Targets for 1971
Hydro Electric	162.6	571.9
Thermal (Steam)	260.0	507.0
Diesel	128.5	133.3
Total	552.6	1,212.2

In order to achieve the aforementioned objectives and targets, the Plan outlays for power development will be approximately 3,540 million baht or about 6 percent of the total development expenditures, as compared with 4,300 million baht or about 13 percent of the total outlays during the First Plan. The decline of the Plan expenditures for this sector is based on the policy of increasing the effective utilization of the existing major hydro-electric projects, namely the Bhumibol and Ubolratana multi-purpose projects. Approximately half of the sector expenditures will be allocated for the extension and interconnection of the grid system in order to derive maximum value from existing facilities. Major power development projects included in the Second Plan are:—

Generation

Hydro generating capacity will be tripled by installation of two additional 70 MW generators at Bhumibol and 8.3 MW generator at Ubolratana in the Northeast. Steam capacity will increase when a third 20 MW unit at its Krabi plant is added. New major projects included in the power generation program are the Fourth Stage Yanhee project, Lam Dom Noi, Pattani, Sirikit (Nan project) and Phuket diesel plant.

Distribution

The major transmission and distribution projects in the Second Plan involved the construction and improvement of the 1st and 2nd Stages of the Yanhee project, the distribution system for the Ubolratana project, and the transmission network in the vicinity of the Krabi project which will be continued and completed during the Plan period. In addition, the construction of a transmission and distribution system in the 3 provinces of the lower South (Yala, Pattani, and Narathiwas), the expansion of the distribution system in the metropolitan area particularly in Dhonburi, Samut Prakan, Pathumthani, and Nonthaburi, and the construction of distribution system in the Lam Dom Noi area which will be undertaken simultaneously with the construction of the dam.

TRANSPORT AND COMMUNICATIONS

The prime objective of the development program for this sector is to improve the standard of the transport and communications system and establish a strong foundation in order to provide adequate support to the overall economic developmetnt of Thailand. The development expenditures proposed in this sector amounts to 17,080 million baht which represents about 31 percent of the total development outlays of the Second Plan.

Transport

The program for the development of transport has been drawn up covering the development of inland, water, and air transport facilities and services. The highway development program will continue as the largest component of the development expenditure for this sector. In addition, greater emphasis is placed on the provincial road or feeder road program. The Plan aims at highway construction of 3,734 kilometres and 2,124 kilometres of provincial roads.

The railway development program is concentrated on improving the carrying capacity and efficiency of the State Railway systems, continuing dieselization of locomotives, and replacement of heavier tracks and bridges. At the same time, the Plan also lays special attention on improving the services of state owned transport companies.

Included in the development of transport are plans for improvement of coastal shipping and international port facilities, and the establishment of a merchant marine fleet.

Air transport services will be further improved, in particular, to areas inaccessible by road or rail. At the same, time, every effort will be made to improve and maintain Bangkok as an international air hub of Southeast Asia.

Communications

The development of communications in the Second Plan will be directed towards improving and increasing the efficiency of the networks to meet the growing demand for services. Special emphasis will be put on the expansion of telephone services both in metropolitan and provincial

cities. The installation of the nationwide telecommunications system will be completed during the Plan period, and feeder lines for commercial and official uses will be linked. In addition, the construction of a ground station for satelite communications will be erected in Thailand.

A table showing the physical targets in the transport and communications sector is given below:—

Physical Targets in the Transport and Communications Sector

	Unit	1966	Targets for 1971
Transport:			
Highways:			
National Highways	k.m.	9,611	11,294
Provincial Highways	k.m.	6,903	9,027
Railways:			
Freight cars 1/	Number	8,200	8,396
Passenger cars 1/	Number	820	857
Diesel trains	Set	10	48
Locomotives (diesel)	Number	165	243
Passengers	1,000 Passenger-k.m.	2,932,000	3,399,000
Freight	1,000 Ton-k.m.	1,518,000	1,676,000
Communications:			
Telephones (Total)	Line	83,000	186,300
Bangkok & Thonburi Area	Line	55,000	142,300
Provincial Area	Line	28,000	44,000
Post office (Total)	Number	317	512
Bangkok & Thonburi Area	Number	27	72
Provincial Area	Number	290	440
Satelite Communication		Construction of a permanent ground station for international satelite communication.	

1/ 1967-1971, not including 339 and 173 depreciated and replaced freight cars and passenger cars respectively.

TRADE AND SERVICES

Trade

The Plan objective in the field of trade adheres to the policy that the economy would prosper more rapidly within the framework of free enterprise and private initiative. Government roles are limited to facilitating and encouraging free competition as well as promoting the fair trade practices. In the field of foreign trade, several measures will be adopted to promote trade expansion with other countries. Imports will also be encouraged, particularly, those of capital goods and raw material of importance in industrial development. Export targets for some major commodities namely, paddy, maize, kenaf, tin concentrate, and cement are set at 2 million tons, 1.4 million tons, 385,000 tons, 30,000 tons, and 800,000 tons respectively. The trade sector as a whole is expected to grow at an average of 8 percent annually during the Plan period, and its share in the Gross National Product will equal about 18.6 percent by 1971. The trade promotion projects in the Second Plan include marketing promotion, market analysis, and price subsidy programs for major agricultural commodities. The development outlays for these projects amount to 180 million baht for the Plan period.

Services

The Plan recognizes the growing importance of the service industries in the economy, especially, transport, construction, and tourism. The Government will continue to provide a more favorable economic infrastructure and climate within which the service industries can grow and help to generate further growth. Several measures and programs will be adopted to stimulate the activities of the private sector in these industries. Certain government rules and regulations will be revised in order to promote the healthy growth of the service industries in the future.

The program for improving and expanding transport services embraces projects for the survey of land and river traffic, and improvement of private transport systems through better coordination of the routes, establishment of bus stations, warehouses, and installation of better cargo handling equipments. In the construction activities which are growing at a very rapid rate, the Government will concentrate on strengthening

private construction enterprises through the provision of skilled manpower, financial assistance, as well as conducting research to improve the construction techniques and cost saving methods. In addition, improvement of the standard of construction and encouraging the activities of the professional associations will receive special attention. The Government will do its utmost in helping to improve and expand the industries which produce raw materials for the construction business.

In the development of tourism, which now ranks seventh in the export earning items and has been growing at a rate of 10-15 percent per annum during the past years, considerable emphasis will be placed on the expansion of the overseas publicity programs, particularly in North America, Europe, and Japan. Revision and simplification of certain Government regulations and procedures, especially, those concerning customs and immigration, will have to be made in order to promote tourist industries in Thailand.

COMMUNITY FACILITIES AND SOCIAL WELFARE

The primary objective of development in this sector is designed to improve the social system in order to increase the welfare of the population by improving the social and physical environment, reducing their vulnerability to subversion, and increasing their opportunities for advancement'.

The above objective will be implemented through:

— Provision and expansion of utility services in the rural areas, particularly water supply and rural roads.

— Promotion of community development and occupations in the rural areas.

— Extending social welfare services to the helpless and the under-privileged.

— Promotion of employment and the protection of the labor force and fostering of labor relations.

— Improvement of the urban problems by developing of town planning, public housing, recreation, and slum clearance.

— Improvement of public utility services in the metropolitan areas of Bangkok and other provinces, particularly, water supply, drainage and sewerage, and the streets.

— Promotion of urbanization for industrial development purposes.

The major physical targets of the development in this sector during the Plan period are given below:—

Projects	Targets by 1971
1. Rural water supply	30,000 villagse
2. Provision of land through selp-help settlement projects	5,000 families in an area of 125,000 rai.
3. Community development.	Extension of community development activities to cover 60% of the area in the Northeast and border area in the South.
4. Low-income housing project.	3,800 families.
5. Construction and Improvement of the streets in Bangkok and Dhonburi.	Construction and improvement 25 streets, improvement of 70 lanes a year, construction of two new bridges across the Chao Phraya river joining Bangkok and Dhonburi.
6. Improvement of water supply in the metropolitan area.	Adding 200,000 cubic meter of water supply daily.
7. Provincial Water Supply.	Construction of a new water supply system in 225 places adding another 260,000 cubic meters to the daily capacity.

In order to implement the aforementioned projects and other development programs in this sector, the Plan proposes the development outlay of 10,250 million baht of which 3,390 million will come from the budget appropriation: the rest will be drawn from foreign loans and grants, as well as the revenues from local governments and subsidy funds from Local Administrative Organization.

There will be 54 projects implemented during the Plan period, 1967-1971. These can be classified into four major programs namely, rural development, urban development, social welfare, and labor.

Rural Developmeut

The rural development program includes several projects which will help to accelerate overall rural development. By the end of 1971, the provision of rural water supply to 30,000 villages will cover about 60 percent of all villages in Thailand. The Self-help land settlement scheme will be expanded by allocating more land and improving the facilities in the existing settlements. Construction of rural roads will be further accelerated during the next five years. Other rural development programs

include an occupational promotion scheme, community development in the Northeast and border provinces of the South, as well as the hilltribes development program which emphasises upon the expansion of hilltribes settlements and occupational promotion.

Urban Development

The program aims at providing low-income housing in the urban area, particularly in Bangkok and Dhonburi which have a great shortage of urban dwelling units for the low-income people. The Plan proposes the outlay of 100 milion baht for urban housing development to supplement the housing investment by the state enterprises, other agencies, and private housing projects. Another scheme concerning urban reconstruction is the construction of Bangkok-Dhonburi drainage and sewerage system. Other projects include the improvement of the metropolitan and provincial water supply and town planning for about 50 cities.

Social Welfare and Labor

The social welfare program which is to be undertaken by the Public Welfare Department involves the occupational promotion and training of the underprivileged and maladjusted young, the disabled, drug addicts, beggars and prostitutes. The Government also promotes and stimulates the social welfare works conducted by several private foundations and organizations.

In the field of labor, several measures are designed to promote employment especially in the rural areas such as labor welfare, labour relations, and protection of workers as well as elimination of child labor.

PUBLIC HEALTH

The public health development program of the second Plan aims at improving the health and welfare of the population. This requires the provision of adequate medical and health service and facilities particularly in the rural areas and among the low income groups. Medical research activities will also be promoted in the general as well as special fields.

The following physical targets have been proposed for the health sector during the Second Plan.

	1966	Targets for 1971
1. Doctors	4,109	5,444
Ratio of doctor/Population	1 : 8,000	1 : 7,000
2. Nurses	11,885	15,715
Ratio of nurse/Population	1 : 2,800	1 : 2,500
3. Midwives	1,400	3 310
4. Hospital Beds	15,400	20,300
Ratio of hospital bed/Population	1 : 2,150	1 : 1900
5. Ratio of Doctor/Nurses/Hospital beds	1 : 2.7 : 12	1 : 3.2 : 12
6. First-Class Health Centers	217	267
7. Second-Class Health Centers	881	1,431
8. Midwife Centers	1,389	1,739

To implement the above targets, an outlay of 2,570 million baht is envisaged for this sector during the Plan period. Top priority among the curative measures has been assigned to the improvement of provincial hospitals and mental hospitals. Six provincial hospitals at Khon Kaen, Cholburi, Yala, Ubol, Nakornsavarn and Lumpang will be converted into regional hospitals. Facilities for treatment of mentally defective patients will be further expanded. The National Cancer Institute, opened since 1962, will be improved and provided with a 200-bed ward for treatment of patients. Mobile Medical Units will be set up in Khon Kaen, Petchboon, Songkhla and Tak. At the same time, the nursing college at the Women's Hospital will be improved and expanded in order to produce more graduate nurses.

The program for prevention will place emphasis upon expanding the coverage of current progras for control of communicable diseases, namely, tuberculosis, yaws, syphilis, and the malaria program which has shifted from control to the eradication phase.

Among the promotion programs of health and sanitation, special emphasis will be placed on the improvement of health centers, nutrition, maternal and child welfare, and rural water supply especially in the Northeast. Medical research will receive greater attention during the Second Plan period. Research will be undertaken in the fields of indigenous medical plants, food and drug analysis.

EDUCATION

The Second Plan recognizes the importance of education as an integral part of socio-economic development of Thailand. The main objective is to provide an educational system which would develop the human resources to meet the manpower requirements, to facilitate transition into an era of technology, to expand compulsory education and improve facilities in order to accomodate the increasing number of students at all levels. In addition, improvement of quality is to receive special emphasis in the development of education.

The physical targets in the development of education have been proposed as follows:

Education Level	Existing enrolment (1966)			Enrolment in 1971		
	Student	Teacher	School	Student	Teacher	School
Primary (Prathom 1-7)	4,768,000	108,083	24,718	5,504,000	213,851	29,087
General Secondary (M.S. 1-5)	345,502	9,003	1,308	575,700	21,560	1,716
Vocational Secondary	42,600	4,212	187	63,000	8,200	200
Teacher Training	19,776	1,716	29	31,700	2,833	32
Advanced Technical	8,460	475	6	19,090	2,009	10
University	33,531	1,266	5	43,830	3,500	9

In order to achieve the above objectives and targets, the Plan outlay for development in this sector has been proposed at about 6,520 million baht which is almost triple the amount allocated during the First Plan. Major education development programms included in the Second Plan are:—

Primary Education

The improvement and expansion of primary education are envisaged in order to attain the goal of universal education at this level, and to raise the national standard from the fourth to the seventh grade which will help to broaden the base for recruitment to the next higher level of education.

The target is to have 5,504,000 primary students in school by 1971, as compared with the existing enrolment of 4,768,000 in 1966, and 1,150 new schools will be opened making the total of 26,121 schools by 1971. At the same time, additional teachers will be recruited to bring down the teacher-student ratio from 1 : 38 to 1 : 35, and school supervision will be further improved.

Secondary Education

At the secondary level major efforts are to be made towards the expansion of comprehensive schools, so the students will be guided towards studies of practical utility, especially, the vocational high schools which are oriented towards the vocational and technological disciplines. At the same time, the academic standard of the general secondary education will be strengthened to meet pre-university requirements. The World Bank hasa approevd a loan for improvement of the vocational educational education projects. Additional investment will be made to supplement the Canadian assistance for the improvement of the comprehensive secondary schools. The target is to have 638,700 secondary students in school by 1971, both the general and vocational secondary education. The supervision at this level, existing enrolment at this level of education is 388,102. The education both in private and public schools, will be improved in terms of academic standards and facilities.

Teachers' Training

Improvement and expansion of the teachers' training program are of high priority during the Plan period. The target is to produce 42,720 certificate-holding teachers, and 7,050 degree-holding instructors by 1971. The output of trained teachers will have to keep pace with the expansion of education at all levels.

At the technical college level, a new technical college will be established at Tak, making a total of 7 institutes of this kind. By 1971, there will be 19,090 students enrolled at these higher technical institutes throughout the country.

Higher Education

The university-level education program will focus upon upgrading the quality of present institutions and decentralizing the higher education to regions outside Bangkok. The greater amphasis will be stressed upon technical curricula in engineering, agriculture, medicine, science, and other subjects significant for development purposes. During the Plan period, there will be 9 institutes of higher education which will produce 26,760 graduates with undergraduate degrees, and another 1,300 with graduate degrees in various fields. During the Plan period, a new university will be established in the South with the central administration at Pattani, and the first faculty is pected to be opened in 1967.

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